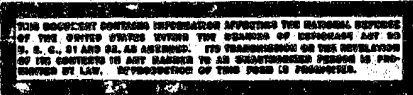


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#### RECENTLY PUBLISHED RESEARCH OF THE CENTRAL ASIA STATE UNIVERSITY

"Heat Capacity of Some Pure Liquids and Azeotropic Mixtures, II," A. K. Zhdanov, Central Asia State U, Tashkent

"Zhur Obshch Khimii" Vol 15, 1945, pp 895-902

Values for  $C_p$  were determined for iso- $\text{PrOH}$ , iso- $\text{AmOH}$ ,  $\text{EtOAc}$ ,  $\text{CS}_2$ , and the azeotropes: benzene-iso- $\text{PrOH}$ , benzene-iso- $\text{BuOH}$ ,  $\text{CS}_2$ - $\text{Me}_2\text{CO}$ ,  $\text{CS}_2$ - $\text{MeEtCO}$ ,  $\text{CS}_2$ -iso- $\text{PrOH}$ ,  $\text{CS}_2$ - $\text{EtOAc}$ ,  $\text{C}_6\text{H}_6$ - $\text{MeEtCO}$ ,  $\text{C}_6\text{H}_6$ - $\text{EtOAc}$ , and  $\text{CHCl}_3$ - $\text{EtOAc}$ . In all cases the second derivative of the thermodynamic potential in respect to temperature was determined. In all cases interpolation formulas of the type  $C_p = A + BT + CT^2$  were applicable, on the basis of which the values of  $k$  in  $\text{MC}_p = kT^3$  were found. Tabulates results.

"Biochemical Factors of Natural Selection in Plants," A. V. Blagoveschenskiy, Central Asia State U, Tashkent

"Zhur Obshch Biol" Vol 6, 1945, pp 217-34

The enzymic and nonenzymic antibacterial substances produced by an organism obviously play an important role in its well-being. By suppressing or completely destroying the interfering bacteria, they permit more complete utilization of the nutrient substrate. Employing the protein of *Verticillium dahliae*, and *Fusarium vasinfectum* as an antigen to immunize rabbits and subsequently using the serum to determine the resistance of cotton plant to these wilts, Fedotova was able to identify the resistant varieties by a negative reaction of their seeds. Blagoveschenskiy assumes that the spores of forerunners

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of present parasites were carried accidentally onto a particular plant; in the course of growth some protein of the host entered the fungus, which reacted with the formation of antibodies, proteolytic enzymes specific against a foreign protein. The nonresistant varieties are possibly those against which the fungus developed an antibody; the resistant varieties do not react with this antibody. Gives experimental data.

"Certain Sulfanilamide Derivatives of Nicotinic Acid," A. S. "adykov, V. I. Maksimov, Central Asia State U, Tashkent

"Zhur Obshch Khimii" Vol 16, 1946, pp 1719-28

In view of the partial control of the toxic effects of sulfa drugs by administration of nicotinic acid, several derivatives of sulfa drugs containing a nicotinic acid residue were prepared. Sulfanilamide (7.2 g) in 30 cc pyridine bases (crude) was treated with 7 g nicotinyl chloride and the mixture was heated on a steam bath 2 hours; after removal of the solvent in vacuo and dilution with  $H_2O$ , the crude product was purified by crystallization from 50% EtOH, then from EtOH, to yield  $N^1$ -nicotinylsulfanilamide, melting at 256-7° (84.6%), identical with the Crossley, et al, product. Describes full process to obtain a great many derivatives.

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